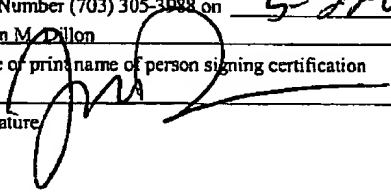


**REMARKS**

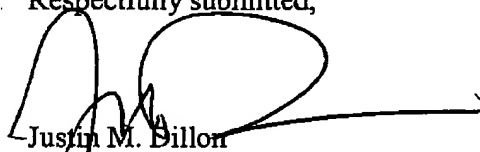
Applicants respectfully submit that the requested amendments add no new matter.

**CONCLUSION**

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned.

*** CERTIFICATE OF FACSIMILE TRANSMISSION ***	
I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office,	
Fax Number (703) 305-3088 on	<u>5-22-03</u>
<u>Justin M. Dillon</u>	
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Signature	

Respectfully submitted,

  
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**Version with Markings to Show Changes Made**

**In the Claims**

The claims have been amended follows.

1. (Amended One Time) A method for restoring a virtual path in an optical network, the method comprising:
- [broadcasting a plurality of resource request packets to a plurality of nodes in said optical network;]
- detecting a port failure of a first port within a link between a first node and a second node of said virtual path;
- in response to a determination that at least one alternate port is available within said link, restoring said virtual path to a second port of said at least one alternate port using said first node, wherein said restoring said virtual path to said second port comprises,
- transferring a restoration message packet between said first node and said second node; and
- identifying said second port within said link in response to said
- transferring [plurality of nodes with resources wherein said nodes with resources are ones of said nodes having a resource necessary to support said virtual path;
- determining an alternate physical path, said alternate physical path comprising ones of said nodes with resources;
- configuring said alternate physical path by establishing a communication connection between said ones of said nodes with resources; and
- restoring said virtual path by provisioning said virtual path over said alternate physical path].

The following new claims have been entered.

146. (New) The method of claim 1, wherein said restoring said virtual path to said second port further comprises:
- initiating a port switch request for said second node,
- provisioning said virtual path to said second port, and
- updating provisioning information in a node database.

147. (New) The method of claim 1, wherein said restoring said virtual path to said second port is completed in less than 2 seconds.

148. (New) The method of claim 1, wherein said restoring said virtual path to said second port is completed in less than 250 milliseconds.

149. (New) The method of claim 1, wherein said restoring said virtual path to said second port is completed in less than 50 milliseconds.

150. (New) The method of claim 146, further comprising:  
in response to a determination that no alternate port is available within said link,  
restoring said virtual path to an alternate physical path, wherein said restoring said virtual path to said alternate physical path comprises,  
broadcasting a plurality of resource request packets to a plurality of nodes in said optical network;  
identifying a plurality of nodes with resources wherein said nodes with resources are ones of said nodes having a resource necessary to support said virtual path;  
determining an alternate physical path, said alternate physical path comprising ones of said nodes with resources;  
configuring said alternate physical path by establishing a communication connection between said ones of said nodes with resources; and  
provisioning said virtual path over said alternate physical path.

151. (New) The method of claim 146, further comprising:  
in response to a determination that no alternate port is available within said link,  
changing a state of said virtual path to restoring,  
identifying a plurality of adjacent nodes adjacent to said first node with required bandwidth for said virtual path,  
forwarding a path restoration request to said plurality of adjacent nodes, and  
waiting for a response to said path restoration request for a first predetermined time interval.

152. (New) The method of claim 151, further comprising:  
if said response to said path restoration request is not received within said first predetermined time interval,  
repeating said identifying a plurality of adjacent nodes, said forwarding a path restoration request to said plurality of adjacent nodes, and said waiting for a response to said path restoration request, for a second predetermined time interval.
153. (New) The method of claim 152, further comprising:  
if said response to said path restoration request is not received within said second predetermined time interval,  
generating a network alarm.
154. (New) The method of claim 153, wherein said first and said second predetermined time intervals are defined during provisioning of said virtual path.
155. (New) The method of claim 153, wherein said first and said second predetermined time intervals are dynamically calculated by said optical network based on a network traffic condition.
156. (New) A machine-readable medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions, when executed, cause said machine to perform a method for restoring a virtual path in an optical network, the method comprising:  
detecting a port failure of a first port within a link between a first node and a second node of said virtual path;  
in response to a determination that at least one alternate port is available within said link, restoring said virtual path to a second port of said at least one alternate port using said first node, wherein said restoring said virtual path to said second port comprises,  
transferring a restoration message packet between said first node and said second node; and  
identifying said second port within said link in response to said transferring

157. (New) The machine-readable medium of claim 156, wherein said restoring said virtual path to said second port further comprises:

initiating a port switch request for said second node,  
provisioning said virtual path to said second port, and  
updating provisioning information in a node database.

158. (New) The machine-readable medium of claim 156, wherein said restoring said virtual path to said second port is completed in less than 2 seconds.

159. (New) The machine-readable medium of claim 156, wherein said restoring said virtual path to said second port is completed in less than 250 milliseconds.

160. (New) The machine-readable medium of claim 156, wherein said restoring said virtual path to said second port is completed in less than 50 milliseconds.

161. (New) The machine-readable medium of claim 157, said method further comprising:

in response to a determination that no alternate port is available within said link,  
restoring said virtual path to an alternate physical path, wherein said restoring said virtual path to said alternate physical path comprises,  
broadcasting a plurality of resource request packets to a plurality of nodes in said optical network;  
identifying a plurality of nodes with resources wherein said nodes with resources are ones of said nodes having a resource necessary to support said virtual path;  
determining an alternate physical path, said alternate physical path comprising ones of said nodes with resources;  
configuring said alternate physical path by establishing a communication connection between said ones of said nodes with resources; and  
provisioning said virtual path over said alternate physical path.

162. (New) The machine-readable medium of claim 157, said method further comprising:

in response to a determination that no alternate port is available within said link,  
changing a state of said virtual path to restoring,  
identifying a plurality of adjacent nodes adjacent to said first node with  
required bandwidth for said virtual path,  
forwarding a path restoration request to said plurality of adjacent nodes, and  
waiting for a response to said path restoration request for a first predetermined  
time interval.

163. (New) The machine-readable medium of claim 162, said method further comprising:

if said response to said path restoration request is not received within said first  
predetermined time interval,  
repeating said identifying a plurality of adjacent nodes, said forwarding a path  
restoration request to said plurality of adjacent nodes, and said waiting  
for a response to said path restoration request, for a second  
predetermined time interval.

164. (New) The machine-readable medium of claim 163, said method further comprising:

if said response to said path restoration request is not received within said second  
predetermined time interval,  
generating a network alarm.

165. (New) The machine-readable medium of claim 164, wherein said first and said  
second predetermined time intervals are defined during provisioning of said virtual path.

166. (New) The machine-readable medium of claim 164, wherein said first and said  
second predetermined time intervals are dynamically calculated by said optical network based  
on a network traffic condition.

167. (New) A system comprising:  
means for detecting a port failure of a first port within a link between a first node and  
a second node of a virtual path within an optical network;  
in response to a determination that at least one alternate port is available within said  
link, means for restoring said virtual path to a second port of said at least one  
alternate port using said first node, wherein said means for restoring said  
virtual path to said second port comprises,  
means for transferring a restoration message packet between said first node and  
said second node; and  
means for identifying said second port within said link in response to said  
transferring.